

## The Anthiine Fishes, *Odontanthias dorsomaculatus* sp. nov. and *Plectranthias bauchotae* Randall, from the Western Indian Ocean

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**Abstract** A new serranid species, *Odontanthias dorsomaculatus*, is described from the Saya de Malha Bank, western Indian Ocean. This species is closely related to *O. unimaculatus* (Tanaka) from Japan, but differs from it in having a slenderer body, more lateral line scales and different coloration. *Plectranthias bauchotae* Randall, a rare anthiine fish collected from the same locality, is also described.

Two species of anthiine fishes were collected in 1977 during a survey of demersal fish made on the Saya de Malha Bank, western Indian Ocean at depths between 120 m and 190 m by the Japan Marine Fishery Resources Research Center. One is described as a new species, *Odontanthias dorsomaculatus*, based on two specimens. The other, *Plectranthias bauchotae* Randall, was described in 1980 based on a specimen from Banc de l'Etoile, south of Madagascar. In the present study, a more detailed description of this species is also made by using the materials collected recently.

In the following description, data of the paratype, when different from those of the holotype, are given in parentheses. The length of the caudal peduncle was measured diagonally from the rear base of the anal fin to the midbase of the caudal fin. The last rays of the dorsal and anal fins were counted as one when branched to the base. Counts for vertebrae and predorsal bones were taken from radiographs.

Type specimens are deposited in the Laboratory of Marine Zoology, Faculty of Fishes, Hokkaido University (HUMZ).

### *Odontanthias dorsomaculatus* sp. nov.

(Fig. 1)

**Holotype.** HUMZ 74194, 134 mm SL, collected by an otter trawl, Saya de Malha Bank, 10°43'S, 61°19'E, depth 120 m, September 3, 1977.

**Paratype.** HUMZ 73951, 110 mm SL, collected by an otter trawl, Saya de Malha Bank, 11°25'S, 60°49'E, depth 158 m, September 2, 1977.

**Diagnosis.** Dorsal rays X, 14; anal rays III, 7; pectoral rays 19; lateral-line scales 44; caudal-

peduncle scales 21; gill rakers 13+28; head length 36.6–37.3% SL; greatest body depth 36.8–38.8% SL; prevomerine-tooth patch with a well-developed backward prolongation; large oval patch of teeth on tongue; endopterygoids toothless. Caudal fin deeply emarginate; third dorsal spine elongated, with a black long dermal flap from middle part of interspinous membrane; most of dorsal rays more or less filamentous; soft dorsal and anal fins scaly basally.

**Description.** Dorsal fin rays X, 14; anal fin rays III, 7; pectoral fin rays 19, dorsalmost and ventralmost unbranched; pelvic fin rays I, 5; branched caudal rays 13(14); lateral-line scales 44; gill rakers on first arch 13+28; vertebrae 10+16; predorsal bones 2.

Body oblong, compressed; greatest body depth 2.58(2.72) in SL; body width just behind gill opening 6.09(5.79) in SL; head length 2.73(2.68) in SL; snout length 3.92(4.56) in head; diameter of orbit 3.77(3.42) in head; interorbital space convex, the bony interorbital width 3.77 (3.98) in head, about as wide as eye diameter; length of caudal peduncle 1.75(1.67), least depth of the same 2.92 (3.15) in head.

Mouth large and oblique; lower jaw projecting beyond the upper when mouth is closed; upper jaw length 2.23(2.24) in head; maxillary nearly reaching a vertical through posterior edge of pupil; maxillary broadly expanded posteriorly, its greatest depth 1.63(1.71) in eye diameter; no supramaxillary. Nostrils close together, just in front of eye; anterior nostril on elevated rim with a produced posterior flap; posterior one larger, ovoid in shape. Upper jaw with an outer series of large conical teeth and an inner band of villiform

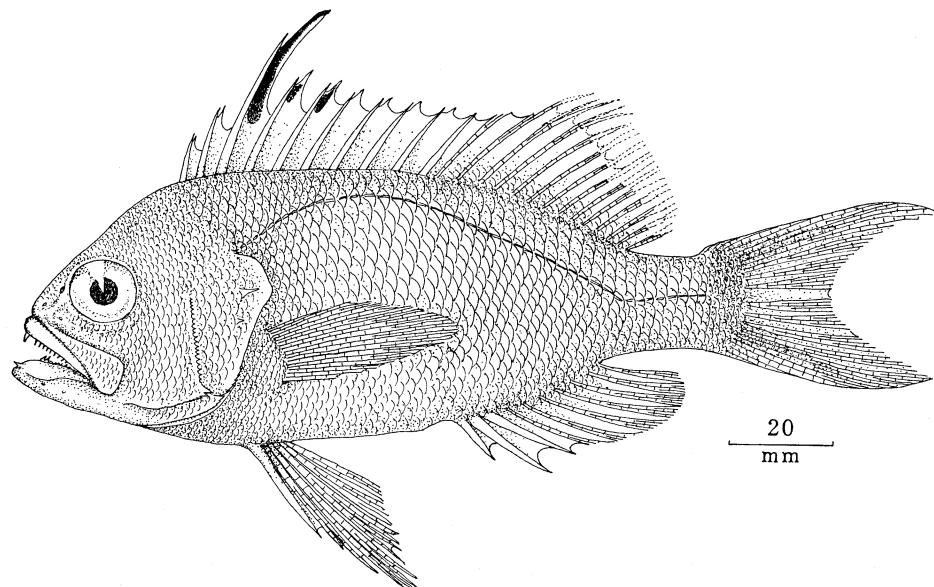


Fig. 1. Holotype of *Odontanthias dorsomaculatus* sp. nov. HUMZ 74194, 134 mm SL.

teeth; anteriormost one or two teeth of outer series near symphysis enlarged into a canine; one or two teeth of inner band near symphysis enlarged into an incurved canine; lower jaw with a canine anteriorly on each side of symphysis and three canines posteriorly; a band of conical teeth on side of lower jaw; prevomer and palatines with teeth; prevomerine-tooth patch with a well-developed backward prolongation; no teeth on endopterygoids; large oval patch of teeth on tongue. Opercle with three flat spines, the middle one longest; vertical limb of preopercle finely serrated; one or two spines at angle; horizontal limb slightly serrated; distal margin of subopercle and interopercle serrated near their junction. Gill rakers numerous, longer than gill filaments.

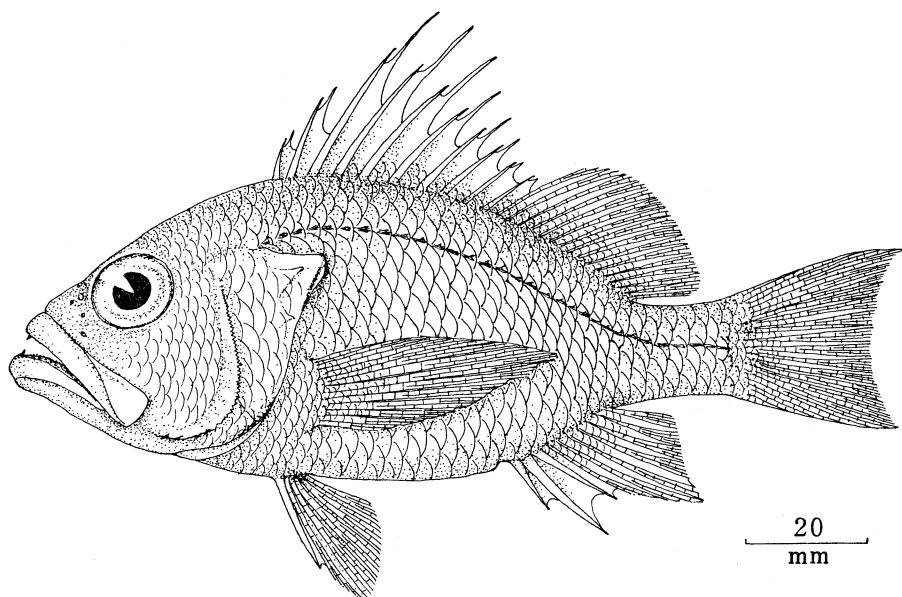
Dorsal fin unnotched, inserted above slightly before upper end of gill opening; third dorsal spine longest, its length 1.63(2.34) in head, with a long dermal flap from middle part of interspinous membrane. Anal fin originating below base of 2nd dorsal soft ray; second anal spine about as long as third one; length of first anal spine 4.90 (4.56), second anal spine 2.65(2.61), third anal spine 2.63(2.65) in head; longest (3rd) anal soft ray 1.92 (ca. 2.05) in head; posterior tip of dorsal fin and anal fin rounded. Pectoral fin subsymmetrical, shorter than head, reaching a vertical through origin of anal fin, its length 3.76(3.53) in

SL. Pelvic fin inserted slightly anterior to lower base of pectoral fin; second pelvic ray more or less filamentous, its length 2.98(3.24) in SL. Caudal fin deeply emarginate.

Scales moderately large, ctenoid; 9 in a series from origin of dorsal to lateral line and 19(18) from origin of anal to lateral line; rows of scales on cheek about 9; head closely scaled except for lips and ventrally on head; spinous dorsal naked, soft dorsal and anal scaly basally. Lateral line broadly arched over pectoral region, the highest part beneath bases of 8th to 10th dorsal spines, forming an angle below last dorsal softray.

Color in alcohol: Body pale brown; each scale on dorsal side with a brown spot; 3rd interspinous membrane with a long black band and a black oval blotch on 4th and 5th interspinous membranes. Color when fresh: Body orange, with white spots on body side; a yellow oblique stripe, running below eye, extends to operculum; three pale pink blotches on dorsal side, the first on the anterior part of dorsal fin, the second at the base of 3rd to 7th dorsal soft rays, the third across top of caudal peduncle; dorsal fin orange, its tip pale pink; third interspinous membrane with a long black band and a black oval blotch on the 4th and 5th interspinous membranes (in paratype the blotch of 5th interspinous membrane indistinct).

**Remarks.** The new species is closely related

Fig. 2. *Plectranthias bauchotae* Randall, HUMZ 72438, 119 mm SL.

to *Odontanthias unimaculatus* (Tanaka, 1917), from Tanabe, Japan, but differs from it in having a slenderer body (depth 2.58–2.72 instead of 2.28–2.54 in SL), more lateral-line scales (44 instead of 36–38) and different coloration.

**Etymology.** This species is named *dorsomaculatus* in reference to the black spots on the dorsal fin.

*Plectranthias bauchotae* Randall  
(Fig. 2)

*Plectranthias bauchotae* Randall, 1980: 118, fig. 4 (type locality: south of Madagascar, Banc de l'Etoile, 25°54'S, 44°36'E).

**Material examined.** HUMZ 72347, 96 mm SL, Saya de Malha Bank, 11°10'S, 62°08'E, depth 191 m, August 31, 1977; HUMZ 74309, 119 mm SL, 11°08'S, 61°02'E, depth 125 m, September 5, 1977; HUMZ 72438 119 mm SL, HUMZ 72439, 118 mm SL, HUMZ 72441, 113 mm SL, HUMZ 72442, 112 mm SL and HUMZ 72444, 80 mm SL, 11°16'S, 61°02'E, depth 148 m, September 5, 1977.

**Description.** Dorsal rays X, 16; anal rays III, 7; pectoral rays 14 (one specimen 15), dorsalmost and occasionally ventralmost unbranched; branched caudal rays 15; lateral line complete, lateral line scales 30–32; gill rakers on first arch 5+10–12, total 15–17; vertebrae 10+16; predorsal bones 3.

Body ovate, compressed; greatest body depth 2.32–2.55 in SL; body width just behind gill opening 4.91–5.60 in SL; dorsal and ventral outlines gently and evenly curved; head length 2.25–2.35 in SL; diameter of orbit 3.40–4.08 in head; snout 3.57–4.21 in head; interorbital space flat and narrower than eye diameter, 5.58–6.54 in head; length of caudal peduncle 2.12–2.29, depth of the same 3.40–3.91 in head.

Mouth large and oblique; upper jaw length 2.04–2.15 in head; maxillary reaching a vertical through posterior edge of pupil; maxillary expanded posteriorly, its greatest depth 2.00–2.31 in orbit diameter. Nostrils close together, just in front of eye; anterior nostril with a short tube with a produced posterior flat; posterior one larger, ovoid in shape. Upper jaw with a band of small conical teeth; the band broadest in anterior portion of jaw where inner teeth enlarged into posteriorly directed caniniform teeth; one or two canines on each side near symphysis. Lower jaw with a narrow band of small conical teeth; the band broadened at anterior end of jaw; one or two canines on each side of jaw near symphysis; one or two stout recurved canines on each side of jaw. Prevomer and palatines with a narrow band of small teeth; teeth band on prevomer V-shaped; no teeth on tongue or pterygoid. Preopercle finely serrated on upper margin; lower margin with two antrorse

Table 1. Proportional measurements of the holotype of Randall and our specimens of *Plectranthias bauchotae*, expressed as percentage of the standard length.

	Holotype (from Randall)	HUMZ 72438	HUMZ 72444	HUMZ 72347	HUMZ 72441	HUMZ 72439	HUMZ 74309	HUMZ 72442
Standard length (mm)	81.7	119	80	98	113	118	119	112
Head length	43.5	44.5	42.5	43.9	44.3	44.1	42.9	42.9
Body depth	42.2	40.5	43.1	39.2	42.5	39.8	42.8	38.8
Body width	20.8	18.9	18.8	19.4	20.0	18.8	20.1	17.9
Snout length	10.7	12.2	11.3	10.7	12.4	12.1	10.5	10.2
Eye diameter	12.2	10.9	12.5	12.2	11.5	11.4	11.8	11.6
Upper jaw length	22.2	21.9	20.6	20.4	21.2	20.8	21.0	20.5
Interorbital width	6.4	8.0	6.5	7.1	7.5	6.8	6.7	6.7
Length of caudal peduncle	20.6	21.0	20.0	19.9	19.5	19.5	20.2	18.8
Depth of caudal peduncle	13.5	12.6	12.5	11.2	12.4	12.3	12.6	11.6
Pectoral fin length	36.9	36.8	39.0	37.8	38.9	38.1	39.5	37.5
Pelvic fin length	25.1	22.7	27.5	25.0	25.7	22.9	24.4	24.6
Length of pelvic spine	16.1	15.6	17.5	17.9	14.2	15.3	15.6	15.5
Length of caudal fin	30.5	28.2	32.5	27.6	27.6	29.7	27.7	25.9
Length of first dorsal spine	broken	6.3	7.5	6.8	—	6.8	6.7	6.5
Length of longest dorsal spine	24.9	21.3	—	19.4	21.2	21.2	21.9	22.3
Length of longest dorsal ray	19.6	17.2	18.8	19.4	17.7	17.0	17.7	17.9
Length of first anal spine	10.2	7.8	7.9	9.0	7.1	6.8	8.0	7.1
Length of second anal spine	20.4	16.3	20.0	17.4	16.8	16.1	16.8	15.7
Length of third anal spine	17.1	14.3	16.3	14.3	14.5	13.6	14.3	—
Length of longest anal ray	24.4	18.5	25.3	22.5	27.8	23.3	23.5	22.8

spines; opercle with three spines, middle one longest; upper one obtuse and inconspicuous; distal margin of subopercle and interopercle serrated near their junction. Gill rakers rather widely separate, longest one slightly shorter than gill filament.

Dorsal fin inserted above upper end of gill cleft; dorsal deeply notched; third dorsal spine longest, 1.92–2.26 in head, with a long cirrus, but shorter than that of third spine; the last dorsal spine 3.78–6.22 in head; longest (7th) soft dorsal ray 2.27–2.60 in head. Anal fin originating below base of second dorsal soft ray; second anal spine longest and strongest, 2.13–2.73 in head; soft anal fin acute. Pectoral fin pointed, middle rays longest, reaching to a vertical through base of first soft anal ray, its length 2.53–2.72 in SL. Pelvic fins inserted slightly anterior to pectoral fin base, reaching or falling well short of anus; their length 3.64–4.41 in SL; caudal fin lunate.

Scales moderately large, ctenoid; apical margin of scale provided with large and small ctenii alternating; 4 in a series from origin of dorsal to lateral line, 11 from origin of anal to lateral line; dorsal part of head scaled to posterior nostrils;

rows of cheek scales 6–7; no scales on snout, suborbital, maxillary and ventrally on head; proximal half of soft dorsal and anal fins scaly, spinous dorsal scaly basally. Lateral line complete, arching above, so that it is concurrent with the margin of the dorsal and extending on the caudal peduncle.

Color in alcohol uniform pale brown. Color when fresh: Body reddish yellow with two diffuse dark red bands posteriorly on body, first under posterior spinous dorsal and soft dorsal, second at base of caudal peduncle; small yellow spots scattered on body side; fins reddish yellow.

**Remarks.** The present specimens agree with the holotype of this species reported from Madagascar by Randall (1980) (Table 1).

#### Acknowledgments

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西部インド洋から得られた新種 *Odontanthias dorsomaculatus* と稀種 *Plectranthias bauchotae* Randall  
片山正夫・山本栄一

西部インド洋の Saya de Malha Bank の水深 120-190 m から 1 新種 *Odontanthias dorsomaculatus* と稀種 *Plectranthias bauchotae* Randall が漁獲された。新種は *O. unimaculatus* (Tanaka) イッテンサクラダイと極めてよく似るが、体高がやや低いこと、側線鱗数が多いこと、および体色などで区別される。*P. bauchotae* Randall はマダガスカル南方海域から得られた 1 個体の標本に基いて記載されたが、今回 Saya de Malha Bank から 7 尾の標本が得られたので体色など精しく記載した。

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